

**Manuscript version: Working paper (or pre-print)**

The version presented here is a Working Paper (or 'pre-print') that may be later published elsewhere.

**Persistent WRAP URL:**

<http://wrap.warwick.ac.uk/156928>

**How to cite:**

Please refer to the repository item page, detailed above, for the most recent bibliographic citation information. If a published version is known of, the repository item page linked to above, will contain details on accessing it.

**Copyright and reuse:**

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions.

Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

**Publisher's statement:**

Please refer to the repository item page, publisher's statement section, for further information.

For more information, please contact the WRAP Team at: [wrap@warwick.ac.uk](mailto:wrap@warwick.ac.uk).

**Paradox of Monetary Profit, Shortage of Money in Circulation  
& Financialisation**

Farzad Javidanrad

**August 2021**

**No: 1365**

**Warwick Economics Research Papers**

**ISSN 2059-4283 (online)**

**ISSN 0083-7350 (print)**

# Paradox of Monetary Profit, Shortage of Money in Circulation & Financialisation

**Abstract:** *Over the last four decades, the term “financialisation” has entered economics terminologies to explain the development of capitalist economies in which: a) the rate of profit in the production sector is falling or narrowing relative to that in the financial sector b) profit seeking through financial speculation has grown rapidly among the household and the production sectors; c) public and private debt is rapidly accelerating and its ratio to GDP is increasing swiftly; d) there is an independent and accelerated growth of the financial sector compared to that of the real sector. This paper is a theoretical attempt to shed light on these features through the lens of the paradox of monetary profit and its manifestation in the capitalist economy, i.e. the shortage of money in circulation. The aim of this paper is to show how the paradox of monetary profit provides a theoretical framework to analyse the mechanism by which the capitalist economies move towards financialisation. This theoretical argument shows the connection between the shortage of money in circulation and financialisation. The core idea proposed in this paper is that financialisation is the direct result of the shortage of money in circulation, and that this shortage can be explained through the paradox of monetary profit.*

**Keywords:** Capitalism, Paradox of Monetary Profit, Financialisation, Monetary production Economy, Marx

**JEL:** B11, E11, P10

**Author:** Farzad Javidanrad

**Address for correspondence:** Department of Economics, The University of Warwick,  
Coventry, CV4 7AL; email: F.Javidanrad@warwick.ac.uk

## Introduction:

The term “financialisation” came to economics through heterodox scholars, most notably ([Magdoff and Sweezy, 1987](#)), in their attempt to theorise the state of stagnation in mature capitalist economies by using Marx’s narrative of the evolution of capitalism. The most cited definition of financialisation is given by [Epstein \(2005; 3\)](#) who defines financialisation as “the increasing role of financial motives, financial market, financial actors and financial institutions in the operation of the domestic and international economies”. According to [Magdoff \(2014\)](#)<sup>1</sup>, Sweezy believed that the line of thought that allowed them to connect stagnation to financialisation was one that goes back to the works of Michal Kalecki, Josef Steindl and Paul Baran in the 1950s. Most current heterodox scholars do not recognise that connection anymore. Instead, they try to provide a modern interpretation of the term that has less connection to the Marx reading of capitalism and for this reason, they locate the beginning of financialisation in the 1980s.

These are the two main approaches towards financialisation. The first connects the term to the set of neoliberal policies with regard to capital markets that was adopted by the US administration in the early 1980s and followed by the UK at the same time. These policies, then intensified by the process of globalisation which was justified by mainstream doctrine in support of the free movement of capital. The second approach, however, views financialisation in historical retrospective as a process that repeats itself in all monetary production economies, of which mercantilism and capitalism are respectively the first and second manifestations.

The two approaches have several similarities in the way they look at certain applications of financialisation in the modern world, but they are fundamentally different in perspective. The first tries to find ways of correcting or changing the direction of capitalism, pushing it back towards a de-financialised state as a more socio-economically and politically acceptable form of capitalism, while the second approach does not foresee such a possibility and focuses instead on the historical factors behind the rise and fall of the economic and hegemonic power of various nations under capitalism.

---

<sup>1</sup> Not the same Magdoff as the co-author with Sweezy.

## Financialisation vs Financial Development:

One important question must be answered before critically evaluating these two approaches, that is, why has the term “financialisation” not been acknowledged in mainstream literature? To answer this question, we need to explain the mainstream views of the role of money and financial institutions in the economy. Three factors are relevant here:

**1. The neutrality of money:** Based on the mainstream account of the history of money, commodity money in the form of gold and silver was organically adopted in preference to the barter economy to facilitate the trade of goods and services, that is, to “eliminate the necessity of a happy coincidence of wants required for barter to take place. Thus, money springs forth to facilitate exchange by lubricating the market mechanism, which had previously relied upon barter: money is created to minimize transactions cost”, ([Wray, 2012](#); 4).

In this speculative account, which is not supported by historical facts, two issues can be identified: First, money and money issuers are not part of the real economy. They are the neutral links between real commodities or real assets. Second, money and credit are not different from one another but have the same functionality as a medium of exchange. An increase in money or credit in circulation has a nominal impact and not a real impact on economic variables. In this dichotomic account, it is almost forgotten that money does not create debt, while credit does, with its financial obligation.

**2. The passive role of financial institutions:** In mainstream literature, financial institutions have a passive intermediary role. They are traditionally in the middle of the circular flow of income connecting savers to investors, either nationally (IS curve in a closed economy) or internationally (IS\* curve in an open economy). Their functions are usefully summarized by [Levine \(2005; 869\)](#), “financial systems produce information ex-ante about possible investments and allocate capital, monitor investments and exert corporate governance after providing finance, facilitate the trading, diversification, and management of risk, mobilize and pool savings and ease the exchange of goods and services.”

In this traditional role, credit can be expanded through loanable funds the amount of which is constrained by and is derived from the volume of the saver’s deposits. Therefore, the volume of credit a bank can lend depends on the volume of deposits it receives from its customers and again, in this respect, there is no reason to believe that credit is different from money. Heterodox scholars, by contrast, believe that the causal direction is the reverse, that is, bank

lending leads to the formation of bank deposits not the other way around, and thus has an active role in the economy. (see [Lavoie, 2014](#) and [McLeay et al., 2014](#))

The mainstream claim that the saver's deposits develop the loanable funds in the economy is not even followed by the new central bank researchers. [McLeay et al. \(2014; 1\)](#) from the Bank of England follow the heterodox view that the saver's deposits do not create loans, but on the contrary, loans make deposits:

“... [the] majority of money in the modern economy is created by commercial banks making loans. Money creation in practice differs from some popular misconceptions — banks do not act simply as intermediaries, lending out deposits that savers place with them, and nor do they ‘multiply up’ central bank money to create new loans and deposits. ... Whenever a bank makes a loan, it simultaneously creates a matching deposit in the borrower's bank account, thereby creating new money. The reality of how money is created today differs from the description found in some economics textbooks: Rather than banks receiving deposits when households save and then lending them out, bank lending creates deposits. In normal times, the central bank does not fix the amount of money in circulation, nor is central bank money ‘multiplied up’ into more loans and deposits”.

**3. Market efficiency in the allocation of resources:** According to the efficient market hypothesis (EMH) agents are rational and with perfect foresight as information is freely available for all market participants. This theory dismisses any form of abnormality or disproportionality in terms of profit, size, and resource allocation in the financial market. Mainstream scholars believe that abnormalities cannot last long in the presence of speculators and arbitrageurs because their activities bring any abnormality into equilibrium. [Friedman \(1953; 175\)](#) supports this view by calling speculation a stabilising factor. Any mispriced assets (either real or financial) will revert to their normal price and the possibility of having bubbles in the market is zero. According to this line of thought, any permanent increase in the size of the financial sector is attributable to the proportionate development of the real sector. Therefore, the size of the financial sector depends on the demand of the real sector for financial services. As Cochran pithily puts it, “like the weather, if you do not like the size of finance, just wait a while.... Demand that shifts out can shift back again”. ([Cochran, 2013; 31 & 47](#))

The combination of these three factors leads mainstream scholars to degrade the concept of “financialisation” and reframe it as “financial development”, which is not only constructive as a term but also describes a positive contribution towards economic growth. (see [King and Levine, 1993](#); [Rajan and Zingales, 1997](#)).

## **Heterodox Approaches to Financialisation:**

As mentioned earlier, two distinct approaches towards financialisation can be identified in heterodox literature. In this part, we briefly explain these approaches.

### ▪ **The First Heterodox Approach to Financialisation**

The first approach interprets financialisation as a new phase of capitalism, beginning in the early 1980s, during which many neoliberal policies were implemented to facilitate free movement of capital across the globe. [Lapavistas \(2013; 793\)](#) correctly refers to the pressure of competition and the need for maintaining profitability as the main driver of these policies. He defines financialisation as a “systemic transformation of mature capitalist economies with three interrelated features. First, large corporations rely less on banks and have acquired financial capacities; second, banks have shifted their activities toward mediating in open financial markets and transacting with households; third, households have become increasingly involved in the operations of finance. The sources of capitalist profit have also changed accordingly.”, ([Lapavistas, 2011; 611](#)).

[Epstein \(2005; 3\)](#) believes financialisation, along with the rise of neoliberalism and globalisation, are three defining characteristics of the new era of capitalism. [Stockhammer \(2012; 48\)](#) focuses on the impact of financialisation on the behaviour of non-financial agents when there is a shift of power from labour to capital and also from company to shareholders. He believes that the process of financialisation is the result of a “finance-dominated regime of accumulation” which is characterised by an increase in the profit of the financial sector and the “sluggish growth” of investment in the real sector, along with a “polarisation of income distribution” that makes the economic system susceptible to financial bubbles, and eventually financial crisis.

Apart from [Epstein \(2005, 2015\)](#), [Lapavistas \(2011, 2013\)](#) and [Stockhammer \(2012\)](#), other heterodox scholars following the first approach, such as [Palley \(2007, 2013\)](#), [Van Treeck \(2012\)](#), [Hein \(2012\)](#), [Orhangazi \(2008\)](#), [Greenwood & Scharfstein \(2013\)](#), and [Krippner \(2005\)](#), locate its origins slightly earlier but limit the term to the period of the 1970s onward.

According to the first approach, three dimensions of financialisation are as follows:

- a) Extensive growth of the financial sector and of its ability to make a profit through financial instruments. [Philippon & Reshef \(2013\)](#) and [Greenwood & Scharfstein \(2013\)](#) have discussed this claim using various measures, such as market capitalisation, the share of the sector in GDP, wage distribution in the financial sector compared to the real sector, etc.
- b) A rise in the importance of making a profit through financial channels for non-financial corporations. (see [Foster, 2006, 2007, 2010b](#))
- c) A rapid increase in the level of debt for the non-financial sector and, more specifically, the household sector (see [Crotty, 2009](#); [OECD, 2019](#))

One of the key elements in the theory of financialisation propagated by these scholars is the possibility of reversing the process of financialisation. They believe de-financialisation can simply happen through tighter regulations, the separation of investment banking from commercial banking ([Sweeney, 2019](#)), democratic reformation and reorientation of the finance industry, and by prohibiting financial institutions from risky speculative activities and leading them towards their essential functionalities ([Lawrence, 2016](#); [Ulgen 2016](#)), in one word, by “socialising” their activities. [Lapavitsas \(2013; 792\)](#) believes that the cause of financialisation should be examined “in the altered behaviour of the fundamental agents of capitalist accumulation, including non-financial corporations, banks and workers”. Therefore, it is possible to control all finance-related motives, actors, and markets through “democratic pressure”, “the resistance of financialised citizens” and the increase of the role of state and syndicates in the economy ([Karwowski, 2019; 1020](#)), or by “re-establishing the command of the social and collective over the private and individual for the modern era”, ([Lapavitsas, 2013; 792](#)).

These policy recommendations, wrapped in academic terminology, are based on a very simple view that greed is the main cause of financialisation and should be controlled and fought by means of tougher rules and regulations in order to make the financial sector more suitable and sustainable for the economy.

This fundamental mistake goes back to their flawed analysis of the origin of the financialisation process, both in terms of its source and its time of inception. First, it is accepted that one of the theoretical foundations of capitalism is the recognition of greed and the acceptance of self-interest seeking. If producers should think about profit maximisation, why not bankers? It is



believed that a rational agent follows the principle of “the more, the better” and, if the cost is the same, he/she prefers to choose a basket of 10 eggs over a basket of 5 eggs, even if he/she does not need extra eggs. [Bernard De Mandeville](#) (“*The Fable of The Bees: or, Private Vices, Public Benefits*”, 1714), [David Hume](#) (“*On The Balance of Trade*”, 1752), and [Adam Smith](#) (“*An Inquiry into the Nature and Causes of the Wealth of Nations*”, 1776), all tried to show that in a free and competitive market all self-interest & profit-seeking competitions between individuals even the most selfish ones, unintentionally, contributes to the public benefit.

As far as history allows us to investigate, none of the financial services, whether provided by individuals or institutions, have prioritised public benefits over individual ones. [Hudson \(2015; 133-134\)](#) provides many examples of such behaviours, even in the beginning of the Industrial Revolution, when financiers refused to finance the railway industry in Britain for a long time until they obtained monopoly ownership rights that legalised the maintenance of their “rent-seeking privileges”.

The search for ethical inducements directs us to think beyond capitalism. There is no way to fix capitalism by prioritising social/public over private preferences without also redefining the role of government and its power in the economy.

Second, it is not difficult to locate the mainstream historical mindset regarding the intermediary role of financial institutions behind this formally heterodox analysis. Financial institutions, by their very nature, cannot remain in an intermediary role. They create credit and expand debt to make a profit and gain a bigger share of total income. Perhaps the first lesson we can take from economic history is that tough rules and regulations on financial institutions’ activities cannot be maintained permanently, and will be replaced by much laxer regulations due to the shortage of money in circulation in the monetary production economy, a shortage that is in turn exacerbated by the credit-debt reproduction mechanism<sup>2</sup>. The history of banking regulation in capitalist economies “is best characterized by the swinging of a pendulum, oscillating between the two opposing poles of greater and lesser regulation” (see [Johnston, 2019](#)).

Third, [Lapavitsas \(2013; 792\)](#), a prominent scholar following the first approach, put his finger on the collapse of the Bretton Woods Agreement in 1971-1973 as the main driver of the process of financialisation. What he does not consider is the fact that the fixed proportion between the

---

<sup>2</sup> This will be discussed later in the section related to the paradox of profit.

value of the dollar and the value of a certain amount of gold, which was the backbone of this agreement, could not be sustained in a monetary production economy because devaluation of currency is an integral part of such an economy. Therefore, the collapse of the Bretton Woods Agreement was not the cause, but the direct outcome of the shortage of dollars in circulation on a national and international scale.

One aspect of financialisation that is discussed in detail in the first approach is its impact on the perception of the source of profit for non-financial companies. (see [Stockhammer, 2012](#); [Lapvitsas, 2013](#)). The traditional method of extending profit for non-financial companies is through reduction of costs (using temporary contracts, defining efficiency per worker, avoiding more waste through employing machines/robots, using call options/contracts for inputs) and by increasing the level of income (through advertisement, competition, applying technological advancements, using put options/long contracts for selling, etc.). In a financialised economy, however, making profit through these traditional channels becomes more challenging and, in some cases, riskier compared to profit-seeking through financial channels. In such an economy, where there is separation of ownership and management, corporate managers (agents) prefer short-term profit through financial channels to risky profit through long-term investment.

For corporate managers (agents), with no guarantee for their jobs and working for a limited number of years under the monitoring of the main shareholders (owners), it would be irrational to jeopardise their position by moving towards long-term investment projects when shareholders also need to sacrifice their short-term profit in the expectation of getting a better share of profit in the future, that is, for a profit that is not certain because of severe competition and lack of monopoly power in the market.

### ▪ The Second Heterodox Approach to Financialisation

As mentioned in the introduction, one of the key disparities between two heterodox approaches is about the beginning of financialisation. While financialisation is recognised as a characteristically modern transformation in the first approach, scholars following the second approach conceptualise it as a process that began on a macro-scale with the birth of the monetary production economy. This has a history older than capitalism, although some scholars use the term “historical capitalism” which also covers the earlier period of mercantilism. (see [Arrighi, 1994](#); [Braudel, 1981 & 1984](#))

In this approach, financialisation is characterised by its dominative and constantly expanding capital accumulation process, operating in conjunction with the credit-led monetary production economy. Advocates of this view believe that linking the origin of financialisation to the neoliberal policies in the 1970s-1980s is misleading because these policies merely eliminated restrictions and paved the way for a more rapid expansion of financialisation, which itself “has deeper roots that are unrelated to neoliberalism” (Kotz, 2008; 1).

According to this view, financialisation cannot be fully understood without examining the underlying capital accumulation process in its historical context. One of the pioneering scholars is Arrighi (1994), who introduced the concept of “systemic cycles of accumulation” for an economic system based on Marx’s theory of “the circuit of money capital” (M-C-M'), but with his own unique interpretation that differs significantly from Marx’s initial account. He believes the development of capitalism since the 1970s should be seen “in the light of patterns of recurrence and evolution, which span the entire lifetime of historical capitalism as a world system. Once we stretch the space-time horizon of our observations and theoretical conjectures in this way, tendencies that seemed novel and unpredictable begin to look familiar”<sup>3</sup>(Ibid; 4).

He splits the M-C-M' circuit into two phases; each phase (cycle) covers a specific extended period. The initial phase (M-C), represents a period of “material expansion” with a specific regime of accumulation, distinguished by “investment in fixed capital that creates the potential for regular increases in productivity and mass consumption. For this potential to be realized, adequate governmental policies and actions, social institutions, norms, and habits of behaviour (the “mode of regulation”) were required” (Ibid; 2). This is the phase in which capitalism can be identified by its specialisation in massive-scale production, investment, and trade as the main source of profit accumulation. But this productivity and profitability will eventually be weakened due to “market saturation and capitalist competition” (Robinson, 2011; 273). This leads to the second phase (C-M'), the period of the “rebirth of financial capital” and its expansion, in which “the locus of accumulation shifts to finance capital; *haute finance* comes to dominate the hegemonic power by manipulating financial services to sustain profit making.” (Ibid; 273).

---

<sup>3</sup> This paper does not accept the idea of the “longue durée” capitalism (i.e. capitalism in its entire life) introduced by Braudel (1982) and used by Arrighi (1994), on the ground that the term “capitalism” cannot be attributed to an economic system that existed in the 13<sup>th</sup> century. For such systems, in which money and credit have had progressive (not dominant) roles, this paper prefers to use the term “monetary production economy”, which includes capitalism.

According to the French historian [Fernand Braudel \(1982\)](#), one of the key elements that should be considered when looking at the whole history of capitalism is that capitalists do not remain under any restriction and are under no obligation to follow any specific specialisation when it comes to profitability. They enjoy their “flexibility” and their “freedom of choice” by investing in any profitable project and it does not need to be in line with national or even international priorities. For this reason, [Arrighi \(1994; 5\)](#) offers another interpretation of M-C-M':

“Money capital (M) means liquidity, flexibility, freedom of choice. Commodity capital (C) means capital invested in a particular input-output combination in view of a profit. Hence, it means concreteness, rigidity, and a narrowing down or closing of options. M' means *expanded* liquidity, flexibility, and freedom of choice. ... Marx's formula also tells us that if there is no expectation on the part of capitalist agencies that their freedom of choice will increase, or if this expectation is systematically unfulfilled, capital tends to revert to more flexible forms of investment - above all, to its money form. In other words, capitalist agencies "prefer" liquidity, and an unusually large share of their cash flow tends to remain in liquid form”.

This “eclecticism”, according to [Braudel \(1984; 246\)](#), happens in all capitalist economies through financial expansion while investment moves away from production and commerce and finds more profitable opportunities in financial activities. [Braudel \(1984; 242-246\)](#) provides examples of the “commission trade” and “acceptance trade”, either for buying or selling, that were practiced in Holland, Italy, Germany and France, and which were all based on credit expansion “4, 5, 10 or 15 times the specie in circulation”. He gives many examples of merchants from various countries who abandoned their commercial activities in order to gain profit from speculation and renting money, and explains how the economic power of a nation rises with production and commerce and then declines through the expansion of financialisation:

“Was this burst of financial activity an aberration as some historians, taking a moral tone, have suggested? Was it not rather a normal development? Already in the latter part of the sixteenth century, another period when capital was superabundant, the Genoese had followed the same itinerary, as the *nobili vecchi*, the official lenders to the king of Spain gradually withdrew from commercial activity. It looks very much as if Amsterdam,

repeating this process, dropped the bird in hand to go chasing shadows, abandoning the money-spinning entrepot trade for a life of speculation and rentierdom, and leaving all the best cards to London - even financing her rival's rise. But then, did Amsterdam really have any choice? Indeed had the rich Italians of the sixteenth century had any choice? Was there even the remotest chance of stopping the rise of the North? At all events, every capitalist development of this order seems, by reaching the stage of financial expansion, to have in some sense announced its maturity: it was a sign of autumn". Braudel (1984, Vol. 3; 246)

Phillips (2006) discusses the same pattern, in Spain, the Netherlands and Great Britain in the 16<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> centuries, when these leading economic powers of the time displayed their superiority through production and trade, but then experienced a deterioration in power when their financial sectors started to direct vast amount of monetary capitals towards rent-seeking and speculation activities. He believes that financialisation is a "sign of late-stage debilitation, marked by excessive debt, great disparity between rich and poor, and unfolding economic decline", (Ibid; 268). Perhaps this is the main reason that leads Hudson (2003) to define financialisation as "a lapse back into the pre-industrial usury and rent economy of European feudalism".<sup>4</sup>

The history of capitalism in the second approach is the story of the rise and fall of some developed economies in which prosperity starts with production and trade but ends up with financial activities that do not produce any wealth but rather make bubbles through speculation on the existing assets. This is the situation that Keynes (1936; 103) and Strange (1986;1) called "casino capitalism" in which the "financial system is rapidly coming to resemble nothing as much as a vast casino".

One of the main problems with the second approach is the level of generalisation in its analysis of capitalism as a whole, and financialisation in particular. It downplays the importance of institutions and the cultural aspects of individual nations in regard to the evolution of capitalism, and most importantly, the speed of the financialisation process. Capitalism has diverse manifestations across all developed and developing nations. The Scandinavian version of capitalism is not readily comparable with the American version, and the Chinese version of what is called "state capitalism" is very different from other forms. Despite the fact that it

---

<sup>4</sup> Extract of interview with Hudson on 29 Aug. 2003 with the title: "Who Benefited from the Tech Bubble?".

pushes all of them towards the same destiny, the speed of the financialisation process is very different between them. A study by [Stolbova et. al \(2017; 5\)](#) shows that the overall trend of financialisation was increasing in the Euro Area during the period of 1999-2016, that it was not affected by the crisis of 2008, but has not been followed at the same speed across the EU countries. For example, “Germany has only experienced a weak growth in financialization” ([Ibid; 6](#)), while the UK has experienced a faster speed toward financialisation in the same period.

The main scholars in this approach, such as Braudel, Arrighi, Phillips and Hudson follow the “world-systems theory”, which is a multidisciplinary approach with an emphasis on history towards socio-economic and political issues, such as dual development between core and periphery countries, income inequality, imperialism, world division of labour, etc. Apart from the main criticisms of the world-systems theory (see [Wallestein, 2004; Robinson, 2011](#)), which are beyond the scope of this paper, the key problem with the theory for our purpose here is the fact that it does not show the exact transformation mechanism by which a productive capitalist system changes into a financialised system. There is almost no analytical discussion of how financial sectors in the mature capitalist economies grow stronger and become able to attract more capital than other sectors.

This missing analytical link can be explained by the paradox of monetary profit that is the main contention of this paper. The paradox can explain why the process of financialisation is faster in some mature capitalist economies and why other economies, either developed or developing, are far below the financialisation status that can be seen in the US and UK. This reminds us to pay more attention to the speed at which the shortage of money is created

### **The Paradox of Monetary Profit:**

It is almost impossible to fully understand capitalism and its transformation from a competitive and productive to a financialised unproductive monopoly system without questioning its source of monetary profit. According to [Marx \(1885, Vol. 2; 201\)](#), one of the opponents of the economist Thomas Tooke (1774 - 1858) asked him a question about the source of money for the realisation of profit, using the circuit of money capital (M-C-M'), but “neither Tooke nor anyone else has answered it so far”. It seems the paradox of monetary profit and the circuit of money capital (M-C-M') were renowned issues before Marx, but it was Marx who first

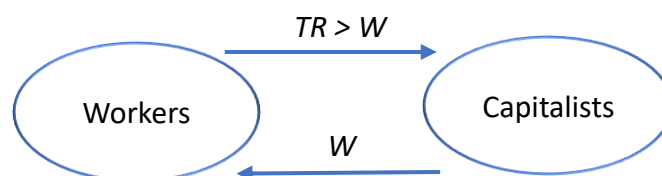
disseminated it in his theory of surplus value in the earliest German publication of *Das Kapital* in 1885.

The paradox refers to the impossibility of the realisation of monetary profit in the capitalist economy from a theoretical point of view. Even mainstream scholars cannot deny the existence of this puzzle. Mankiw (2016; 57) shows that in neoclassical income distribution theory, economic profit should be zero because the total value of production should be equal to the total value of distributed income. Nonetheless, he tries to justify the existence of profit by separating the “accounting profit” from the “economic profit”, which is consistent with the traditional version of capitalism in which the owner, producer, investor and beneficiary are the same person, and the role of credit and financial institutions in the creation of debt is overlooked.

In a model of the political economy in which the total income is divided between two main classes, capitalists and workers, Marx (1885, Vol. 2; 204) explains the paradox as follows:

“The capitalist class remains consequently the sole point of departure of the circulation of money... The capitalist class as a whole cannot draw out of circulation what was not previously thrown into it.”

This means that if the total wage, in the whole system, paid to the workers is  $W$ , it would be impossible for the capitalists (as a class) to make a total revenue ( $TR$ ) higher than  $W$ . This is shown in [Figure 1](#).



[Figure 1](#): Circular flow of income between capitalists and workers

In the best possible scenario workers can spend all their wages on the goods they have produced in the whole system. This empirically means that the capitalists as a class cannot make any profit unless the shortage of money for the realisation of profit is somehow financed. Thus, the paradox of monetary profit manifests itself in the form of a shortage of money in circulation.

If we look at an economy as a system composed of different sectors (rather than classes as Marx projected in his view of the political economy), we have a similar scenario for the banks’



profit in the financial sector, i.e. when banks lend a certain amount of money in the economy, given a fixed supply of money in circulation, how can they monetise their interest (profit)? Figure 2 shows the circular flow of financial transactions between three sectors, namely, household, financial and production sectors.

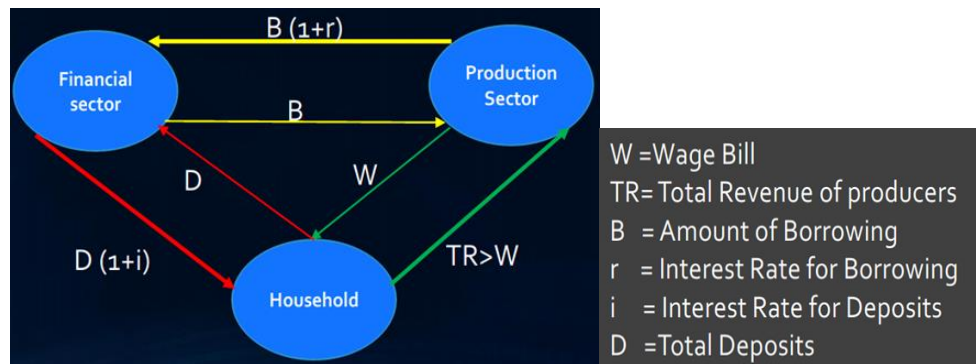


Figure 2: Circular flow of income between household, financial and production sectors

Bruun and Heyn-Johnsen (2009) believe that neither Marx, as the disseminator of the paradox, nor Keynes, who was dealt with the aggregate income determination in his *General Theory*, solved this paradox. Smithin (2016) has also claimed that the puzzle remained unanswered by Marx, but these claims are not true. In Volume 2 of *Capital*, Marx presented a practical (but not theoretical) solution based on the idea that the capitalist will be the final owner of the surplus value by putting his own money into circulation for his own consumption.

Before discussing Marx's practical solution, we need to be clear about the meaning of "theoretical" versus "practical" solution for the paradox of monetary profit. A theoretical, and also sustainable solution, must be able to prove that the same amount of money/credit, brought into and circulating in the system would be enough to monetise profit at the end of the process (i.e. no extra injection of money/credit is needed), regardless of whether the system is defined by classes or sectors. Therefore, any extra money/credit that comes into circulation for the monetisation of profit does not provide a theoretical, but a practical solution.

#### ■ Marx's Practical Solution for the Paradox of Monetary Profit

In Volume 2 of *Capital*, Marx explains:

"How can they [capitalists] continually draw £600 out of circulation, when they continually throw only £500 into it? Nothing comes out of nothing. ... Indeed, paradoxical as it may appear at first sight, it is the



capitalist class itself that throws the money into circulation which serves for the realisation of the surplus-value incorporated in the commodities. But, nota bene, it does not throw it into circulation as advanced money, hence not as capital. It spends it as a means of purchase for its individual consumption. The money is not therefore advanced by the capitalist class, although it is the point of departure of its circulation”, ([Marx, 1885, Vol. 2; 204](#))

According to Marx, surplus value, as a value embedded in commodities, will be realised when capitalists put fresh/new money into circulation for their consumptions. The source of this money could be either their own pockets or bank credit (see Vol. 2, Ch. 17; 195 and Ch. 20; 256). This does not mean that the capitalist pays for his/her own produced goods. It does not make sense to buy from yourself to make a profit. To understand the meaning of “purchasing for its individual consumption” let us imagine there are two capitalists A and B: capitalist A, who produces consumer goods and capitalist B, who produces capital goods. By bringing their fresh money “into circulation as a medium of circulation for their consumption” (Ch. 17; 212), they buy the products of each other and both capitalists are able to monetise their profits. This idea was summed up by [Joan Robinson \(1966; ix\)](#) as: “the workers spend what they get; the capitalists get what they spend”. [quoted from [Asimakopulos \(1988; 269\)](#) ]

Although very innovative there are three issues with this solution. First, in a monetary production economy, the objective of production is monetary profit and not as Marx calls it “the surplus-value incorporated in the commodities”, which may not be monetised in the market. Money in such a system, according to [Keynes \(1933; 1\)](#), is not a “neutral link between transaction of real things and real assets”, but rather is a store of value.

Marx’s solution is in contrast to M-C-M', which had been used long before him to describe the circuit of money capital. In sharp contrast with Arrighi’s interpretation, heterodoxy’s interpretation of M-C-M' is that it represents an important characteristic of a monetary production economy in which “production begins with money on the expectation of ending with more money later”, ([Wray, 1999; 1](#)). Second, in a model based on different sectors, capitalist consumption is already considered in household consumption, while in Marx’s model capitalist consumption cannot be seen without making an extra assumption.

Third, Marx’s solution is valid if the capitalist is both the producer and the financier at the same time, but in a pure credit-led economy, where the producer and financier belong to separate

sectors, applying this practical solution means that the capitalists must accept a debt-profit cycle in which they must borrow more and accept another debt obligation in order to extract the initial profit. This can be justifiable if all capitalists increase their time horizon and chase the profit of the first period by keeping their optimism and incentives and carry on their investment for the second period of production. This was reiterated by [Kalecki's \(1935; 297\)](#) view that “capitalists ... determine ... their profits by their consumption and their investments”, but this profit-chasing process will not be sustainable for the whole productive capitalist class.

Despite all the above reservations, Marx introduced a very novel practical solution, one that has been disregarded in analysis even by the circuitists and post-Keynesian scholars who have claimed to find a solution for the paradox (see [Renaud, 2000](#); [Nell, 2002](#); [Parguez, 2004](#); [Messori and Zazzaro, 2005](#); [Rochon, 2005](#); [Keen, 2010 & 2011](#); [Zezza, 2012](#)). The fact must be accepted that the paradox does not have a theoretical solution over a circuit period and an extra source of money/credit is needed to form a practical solution.

From Marx's point of view, the source of the money needed for the realisation of profit cannot be endogenously generated from what was initially thrown into circulation but comes exogenously from the capitalists' own pockets or bank credit. This is important specifically when we are dealing with a pure credit economy. In a pure credit economy, the source of money in circulation is credit issued by the financial sector. According to [Seccareccia \(1988; 51, quoted in Rochon, 2005; 128\)](#), even “production is a process of debt creation”. Therefore, the source of monetary profit for all profit-seeking sectors must be a fresh/new credit that is brought exogenously into circulation by financiers, without which the shortage of money in circulation would be exposed. This shortage cannot be seen easily in the real world because credit expansion covers it temporarily at the price of more debt and, eventually, more shortage of money in the future.

### **The Connection Between The Paradox of Monetary Profit and Financialisation:**

In Chapter 23 of *General Theory*, [Keynes \(1936; 215-216\)](#) referred to the “scarcity of money” in talking about the monetary policy of mercantilists. He shed lights on the constant battle of the mercantilist economy with the shortage of money in circulation, which repetitively caused a high level of interest rate, on the one hand, and consequently instigated a high level of unemployment among farmers and other small businesses on the other. To win this battle they reached a specific, but also very dangerous and aggressive monetary doctrine in which the

solution was the continuous supply/import of gold and silver, from anywhere, into their economy which allowed them to print more paper money compared to their “neighbouring nations”. [Keynes \(1936; 215\)](#) quotes from Petty (1665, [published in 1691]) that the only way to end “the violent efforts to increase the quantity of money” is “when we have certainly more money than our Neighbor States (though never so little), both in Arithmetical and Geometrical proportion”.

This doctrine was against [Adam Smith’s \(1776; Part IV\)](#) view that the wealth of a nation cannot be measured by the amount of gold and silver it accumulates, which was rooted in the idea of the neutrality of money and its functionality as the medium of exchange<sup>5</sup>. [Keynes \(1936; 208\)](#) had a different view and believed that there was an “element of scientific truth” in that doctrine.

By highlighting historical evidence, [Keynes \(1930, Vol.2; 149\)](#) claims that the rise of civilisations and their wealth comes through enterprises and their ability to make a profit through their investment projects, which in turn depend on the availability of money and “the behaviour of the banking and monetary system”. In his historical analysis of Spain, France, and England, he states that the accumulation of wealth in these countries happened when more precious metals were in circulation and “profit inflation” was higher than “wage inflation”. This was the situation in Spain between 1520 to 1590<sup>6</sup>, in France between 1530 to 1700 and in England 1550 to 1650. According to [Keynes \(Ibid; 158-9\)](#) “in these golden years modern capitalism was born”<sup>7</sup> but with a specific characteristic that has not left us through the intervening centuries, namely, the shortage of money in circulation, whether it is commodity

---

<sup>5</sup> In Part IV of [The Wealth of Nations \(1776\)](#), Smith shows his disbelief in the idea that “a rich country, in the same manner as a rich man, is supposed to be a country abounding in money”. He then continues: “For some time after the discovery of America, the first enquiry of the Spaniards, when they arrived upon any unknown coast, used to be, if there was any gold or silver to be found in the neighbourhood? By the information which they received, they judged whether it was worthwhile to make a settlement there, or if the country was worth the conquering. Plano Carpino, a monk sent ambassador from the King of France to one of the sons of the famous Gengis Khan, says that the Tartars used frequently to ask him if there was plenty of sheep and oxen in the kingdom of France? Their enquiry had the same object with that of the Spaniards. They wanted to know if the country was rich enough to be worth the conquering. Among the Tartars, as among all other nations of shepherds, who are generally ignorant of the use of money, cattle are the instruments of commerce and the measures of value. Wealth, therefore, according to them, consisted in cattle, as according to the Spaniards it consisted in gold and silver. Of the two, the Tartar notion, perhaps, was the nearest to the truth”.

<sup>6</sup> Referring to the research of Professor Earl J. Hamilton, Keynes states that “the first Aztec spoils from Mexico arrived in 1519 [into Spain]”. ([Keynes, 1930, Vol. 2; 152](#))

<sup>7</sup> It seems that Keynes was also aware of Marx’s analysis of the link between extracting more surplus and the exploitation of labour as he says: “A relatively low level of real-wages is necessarily a characteristic of a period of Profit Inflation, because it is partly at the expense of current consumption that the abnormal growth of capital-wealth which accompanies a Profit Inflation is derived. It does not follow, therefore, that a Profit Inflation is to be desired; it is a much safer conclusion that a Profit Deflation is to be avoided”. ([Ibid; 162](#))

money (gold/silver), currency (backed by a fixed portion of gold/silver) or fiat currency (backed by nothing).

We now have a theoretical framework to connect Keynes's historical observations on the scarcity of money and Marx's view on the paradox of monetary profit that manifests a shortage of money in circulation, leading us to the role of financial institutions in a simultaneous creation of credit and debt. These two mechanisms work together with a synergistic power: credit expansion, as mentioned earlier, conceals the shortage of money in circulation provisionally at the cost of rising debt for non-financial sectors in the future. The accumulation of debt in these sectors, in turn, increases the demand for money/credit and decreases the level of consumption and investment, which eventually raises the level of unemployment. They reproduce one another.

The whirl of the credit-debt reproduction mechanism creates extra demand for money, even in the absence of any exogenous shock (such as war or the introduction of new technology), and increases its price and weight in all investment decisions at the same time, as it undermines all investment projects for the firms that do not have a strong balance sheet and must work under intense competition and uncertainty over their expected income. In the absence of any monopoly power (which is usually politically granted), economic agents/units cannot survive if they remain idle without a new investment or technological innovation, and sooner or later must either leave the market or accept more debt. This reproduction mechanism creates a situation in which the price of capital gradually becomes so expensive that the majority of economic agents are no longer able to invest from their own pockets. In this situation, all sectors rely on bank credit. A good example of this is provided by construction companies that must borrow to make houses and households, on the demand side, must also borrow to buy those houses.<sup>8</sup> The entire system relies on the services provided by the ever-growing importance of creditors. They become "too big to fail".

The accumulation of debt for non-financial sectors leads them into massive risk. Households must work harder due to their debt obligations, which lowers their efficient demand, and on the other hand, investors facing narrower profit margins and a riskier future with no guaranteed

---

<sup>8</sup> According to ONS, in 1992 (Q2), the average house price for first-time buyers was £47,000, while the average recorded income of borrowers in that year was £18,000, that is 2.61 times higher than their yearly income. The figures in 2019 (Q2) are £216,000 and £48,000 respectively, that is 4.5 times higher than their yearly income. (see <https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/housepriceindexmonthlyquarterlytables1to19> [Last access 19/04/2020])

flow of income, have less incentive to expand their investment projects. This is similar to what [Marx \(1885, Vol. 2\)](#) explained as a fall in the tendency of the rate of profit in the capitalist economy.

This situation provides the necessary conditions for non-financial agents to move towards financial activities in order to gain bigger income or profit out of their traditional channels in a shorter period of time, and, in some cases, to keep the company's attractiveness in the eyes of money holders (shareholders and lenders). For example, many firms, even blue-chip companies that normally have strong balance sheets, use the stock buy-back strategy to increase the value of their companies in the financial market and to make their balance sheets look healthier and stronger in order to encourage shareholders and lenders to keep and use their money in the company. The idea behind the buy-back strategy is to increase the share value of a firm through financial activities instead of by investment in new projects or increasing real assets. Firms that follow this strategy can improve some financial ratios (such as returns on equity and returns on assets) by reducing the asset and equity side of their balance sheet, which are considered positive improvements by financial markets.

Therefore, the point of departure from investment in the real sector is when capital becomes scarce and more expensive, which in turn makes all long-term investment decisions less profitable and not as justifiable. The shortage of money in circulation and the expansion of credit-debt as a temporary practical solution, is the beginning of the financialisation process that eventually leads an economy to “a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production”, ([Krippner, 2004](#); 174). This means that in a financialised economy the transfer happens automatically from M-C-M' to M-M'.

### **Other Symptoms of Financialisation:**

The accumulation of debt and the consequent fall in demand in the real part of the economy is one side of financialisation, but the other side is the rise in the size and power of financial institutions and financial assets in the whole economy. The figures for the size of the financial sector in some capitalist countries that have adopted the market-based (US, UK) rather than the bank-based (Germany, Japan, Nordic countries) financial system indicate that financialisation is not just a theoretical concept. One of the measures is the percentage income share of the financial sector in total income, which shows a speedy growth in the US and UK

economies by comparison with that in the real part of the economy. For example, the figures derived from the [Blue Book \(National Account, 2019\)](#)<sup>9</sup> shows that the percentage share of GDP (income approach) in the UK has increased for financial corporations from 0.9% in 1983 to 2.7% in 2017, while the same percentage share has dropped for non-financial corporations (public and private) from 21.08% to 19.1% in the same period.

There is a similar story in other economies with a market-based financial system. [Greenwood & Scharfstein \(2013\)](#) have provided details of financial services and their movements in the US economy. According to them, “the US financial services industry grew from 4.9% of GDP in 1980 to 7.9% of GDP in 2007”. They believe that the main areas of financial sector growth in the US can be explained by “rising asset management fees” and also rising fees in connection with “household credit” which was powered by the shadow banking system. Based on [Pozar et al.’s \(2010\)](#) estimate, this system in the US economy is now bigger than the traditional banking sector because of less regulation, while performing similar jobs to those of banks.

[Philippon and Reshef \(2013\)](#) also explain two waves of US financial sector growth, from 1860 to the 1930s and from 1950 to 2013, during which the long-run growth of the income share of finance is similar to that in some other countries with a well-established financial sector. A large part of this rapid growth in US financial services is attributed to asset management, which explains about 36% of the total growth as a share of GDP ([Greenwood & Scharfstein, 2013](#)). Others, such as [Goldstein et al. \(2007\)](#), also point to the profit that individual brokers/dealers have gained through trading securities, which has given them a “degree of pricing [or monopoly] power”.

This development is described by [Stockhammer \(2012; 50\)](#) as a deliberate “shift towards fee-generating business rather than traditional banking that generates income as a result of interest differential between rates on deposits and on loans”. Considering the fact that asset management fees have not changed dramatically in the financial world, and in some cases have even fallen (see [Greenwood & Scharfstein, 2013](#); [French, 2008](#); [Philippon and Reshef, 2013](#)), the increase in total fee income reflects the increase in demand for these services.

But it is wrong to think that the process of financialisation only happens in those countries that have adopted the market-based financial system. All capitalist economies move towards financialisation but their rate of transitions are different and that depends on the size of the

---

<sup>9</sup> This can be found in the reference section under the name of the editor of the collection, Steve Drew.

shortage of money created by their financial institutions when it is not contained by the state money supply. As [Sawyer \(2013\)](#) mentions, there are varieties of financialisation processes in terms of their pace and intensity across different periods and geographical regions. Based on the empirical study of [Stolbova et al. \(2017\)](#), the trend towards financialisation in the Euro Area in 2017 is 40% higher than it was in 1999. They also found that the economic and financial crisis of 2008 “has only a mild effect (or no effect at all) on this overall trend”, ([Ibid](#); 5). This is in line with the definition of financialisation as an “accumulation process” in which, accumulation resumes even after a halt or a decline.

The real cause for concern should not be about the movement of financial institutions towards generating more return/profit, but rather it should be about the lack or weakness of the redistribution policies when the whole system (even non-financial corporations, households or government) finds no better way to save the value of their assets or make a profit than to be actively involved in the world of finance. This can offer them risk-less returns from lending or speculating which in turn increases unproductive investment in the existing assets instead of in productive projects. The expansion of rent-seeking or speculative activities in a financial market should be seen as a warning sign that the financial sector is becoming more detached from the real sector.

### Summary:

In this chapter the heterodox origin of the term financialisation was discussed, and in a critical analysis it was explained why this term does not appear in mainstream literature and how mainstream scholars still try to confine the phenomenon it describes to what they call instead “financial development”.

Next, in the heterodox literature, two broad approaches to financialisation in the heterodox literature were reviewed. In the first approach, financialisation is interpreted as a new phase/stage of the capitalist economy, beginning in the late 1970s, and was accompanied by 1) neoliberal policies to reduce the role of government and deregulate financial systems around the globe, giving more roles to market forces for the allocation of resources, and 2) globalisation and allowing unrestricted capital movement beyond national territories. The followers of the first approach consider the possibility of de-financialisation through democratic reformation and increasing the role of government in imposing tighter regulations and better redistribution policies.



In the second approach, financialisation is interpreted in its historical context as an intensified and speeded up accumulation process. The followers of this approach try to find a pattern of financialisation in the history of capitalism. Therefore, from their point of view, financialisation is a recurring sequence of events that has happened already in Spain, The Netherlands, the UK, and the US since the 16<sup>th</sup> century. In this view, financialisation is the last stage of a capitalist economy which is caused by the nature of the capital accumulation process, in which a competitive capitalist system that makes more profit through new innovations that are then put into production evolves into an unproductive capitalist monopoly that makes more profit through financial activities.

This study has followed the second approach but has tried to shed light on the theoretical connection between financialisation and the paradox of monetary profit. According to this study, financialisation in capitalist economies is neither a disconnected part of the capitalist evolution, nor a process that began only in the late 1970s. Financialisation and all its symptoms (features) is the direct result of a gradual accumulation process that works through the credit-debt reproduction mechanism and that leads to a permanent and increasing shortage of money in circulation. Financialisation should be seen as the final stage in the dynamic of all capitalist economies due to the practical challenge of making a profit in a severely competitive and uncertain world of production when money from public channels is in short supply.

All capitalist economies, based on their rent/profit-seeking accumulation process, reach this stage but at different speeds. In such an accumulation process, capital owners can gradually increase their share of profit, and extend their dominance over the distribution of income and other factors of production, through debt creation and the permanent shortage of money in circulation. The only factor that delays the movement towards the final stage is the public money supply as an alternative to the bank credit supply. But in the absence of continuous growth in the money supply, the expansion of credit by the same financial institutions which created debt in the first place leads to more shortage of money in circulation. This vicious circle continues until the debt is unbearable and cannot be accommodated in the system.<sup>10</sup>

The dynamic of this credit-debt reproduction mechanism increases the role and weight of capital in the whole economy, and it makes an impact on the decisions of all agents (investors,

---

<sup>10</sup> There will be only a matter of time that a shock brings the whole system to its knees because part of the system will no longer be able to participate in a new debt contract. This discussion is out of the scope of the current paper but it deserves to be considered as an alternative theory that can explain capitalist crises through the connection between financialisation and the paradox of monetary profit.



producers, households, and government) with regard to investment, production, consumption, and taxation<sup>11</sup>. By increasing the role and weight of capital in the economy, the tendency towards making a profit without investment and production becomes prevalent, as profit can be made much more easily through the financial channels, where the risk is justifiable compared to the uncertainty of making a profit through a long-term investment commitment, when there are fewer profitable opportunities (as the rate of profit is generally falling and competition brings the profit margins down) and incentives for new investment are low.

## Bibliography

- ARRIGHI, G. 1994. *The long twentieth century: Money, power, and the origins of our times*, verso.
- ASIMAKOPULOS, A. 1989. *Kalecki and Robinson. Kalecki's Relevance Today*. Springer.
- BATTISTON, S., STOLBOVA, V., NAPOLETANO, M. & ROVENTINI, A. 2017. *Financialization of Europe: a comparative perspective*. ISIGrowth Working Paper.
- BRAUDEL, F. 1982. *The Structures of Everyday Life: Civilization & Capitalism, 15th-18th Century*, Harper & Row.
- BRAUDEL, F. 1982. *The Wheels of Commerce*, trans. Siân Reynolds. New York: Haper & Row.
- BRAUDEL, F. 1984. *Perspective of the World; Civilization and Capitalism, 15th-18th Century*, Volume III, HARPER.
- BRUUN, C. & HEYN-JOHNSON, C. 2009. *The paradox of monetary profits: an obstacle to understanding financial and economic Crisis*, Economics Discussion Paper.
- COCHRANE, J. H. 2013. *Finance: Function matters, not size*. Journal of Economic Perspectives, 27, 29-50.
- CROTTY, J. 2009. *Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'*. Cambridge journal of economics, 33, 563-580.
- DE MANDEVILLE, B. 1962. *The Fable of the Bees*, 1714. New York, Capricorn Books.
- DREW, S. 2018. *National Accounts articles: Transformation of gross domestic product in Blue Book 2019*. Office of National Statistics
- EPSTEIN, G. 2015. *Financialization: there is something happening here*. Political Economy Research Institute.
- EPSTEIN, G. A. 2005. *Financialization and the world economy*, Edward Elgar Publishing.
- FOSTER, J. B. 2006. *Monopoly-finance capital*. Monthly Review, 58, 1.
- FOSTER, J. B. 2007. *The financialization of capitalism*. Monthly review, 58, 1-12.
- FOSTER, J. B. 2010. *The financialization of accumulation*. Monthly review, 62, 1.
- FRENCH, K. R. 2008. Presidential address: *The cost of active investing*. The Journal of Finance, 63, 1537-1573.
- FRIEDMAN, M. & FRIEDMAN, M. 1953. *Essays in positive economics*, University of Chicago press.

---

<sup>11</sup> The idea of “tax cuts for rich people encouraging them to invest more” comes from the fact that capital is the most important factor of production, compared to labour, land, technology, etc.

- GOLDSTEIN, M. A., HOTCHKISS, E. S. & SIRRI, E. R. 2007. *Transparency and liquidity: A controlled experiment on corporate bonds*. The review of financial studies, 20, 235-273.
- GREENWOOD, R. & SCHARFSTEIN, D. 2013. *The growth of finance*. Journal of Economic Perspectives, 27, 3-28.
- HEIN, E. 2012. *The macroeconomics of finance-dominated capitalism and its crisis*, Edward Elgar Publishing.
- HUDSON, M. 2003. *Who Benefited from the Tech Bubble?* - video
- HUDSON, M. 2015. *Killing the host: How financial parasites and debt bondage destroy the global economy*, Counter Punch.
- HUME, D. 1752. *Of the balance of trade. The gold standard in theory and history*, 330-341.
- JOHNSTON, M. 2019. *A Brief History of US Banking Regulation*. Investopedia.
- KALECKI, M. 1935. *A macrodynamic theory of business cycles*. Econometrica, Journal of the Econometric Society, 327-344.
- KARWOWSKI, E. 2019. *Towards (de-) financialisation: the role of the state*. Cambridge journal of economics, 43, 1001-1027.
- KEEN, S. 2010. *Solving the paradox of monetary profits*. Economics Discussion Paper.
- KEEN, S. 2011. *Behavioural Finance Lecture 07: Endogenous Money & Circuit Theory*. Video.
- KEYNES, J. M. *A Monetary Theory of Production*. Collected Writings of John Maynard Keynes, vol. XIII - The General Theory and After, Part I - Presentation, 1973, London: Macmillan, pp.408-411
- KEYNES, J. M. 1930. *Treatise on money: Pure theory of money* Vol. I. Macmillan, London.
- KEYNES, J. M. 1936. *The general theory of interest, employment, and money*. London: MacMillan.
- KING, R. G. & LEVINE, R. 1993. *Finance and growth: Schumpeter might be right*. The quarterly journal of economics, 108, 717-737.
- KOTZ, D. M. 2008. *Neoliberalism and financialization*. Comunicación presentada el, 2, 22-46.
- KRIPPNER, G. 2004. *What is financialization?* Department of Sociology. UCLA, mimeo.
- KRIPPNER, G. R. 2005. *The financialization of the American economy*. Socio-economic review, 3, 173-208.
- LAPAVITSAS, C. 2011. *Theorizing financialization*. Work, employment, and society, 25, 611-626.
- LAPAVITSAS, C. 2013. *The financialization of capitalism: 'Profiting without producing'*. City, 17, 792-805.
- LAVOIE, M. 2012. *Financialization, neo-liberalism, and securitization*. Journal of Post Keynesian Economics, 35, 215-233.
- LAWRENCE, M. 2014. *Definancialisation: A democratic reformation of finance*, IPPR.
- LEVINE, R. 2005. *Finance and growth: theory and evidence*. Handbook of economic growth, 1, 865-934.
- MAGDOFF, H. & SWEEZY, P. M. 1987. *Stagnation and the financial explosion*, NYU Press.
- MANKIW, N. G. & TAYLOR, M. P. 2014. *Macroeconomics*. European Edition. New York: Worth Publisher.
-

- MARX, K. 1867. *Capital: A Critique of Political Economy*, Vol. 1 New York: International.
- MARX, K. 1885. *Capital: Critique of Political Economy*, Vol. 2, The Process of Circulation of Capital, The Marx/Engels Internet Archive.
- MARX, K. 1894. *Capital: A Critique of Political Economy*. Vol. 3, Penguin.
- MCLEAY, M., RADIA, A. & THOMAS, R. 2014. *Money creation in the modern economy*. Bank of England Quarterly Bulletin, Q1.
- MESSORI, M. & ZAZZARO, A. 2005. *Single-period analysis: financial markets, firms' failures, and closure of the monetary circuit*. The monetary theory of production. Springer.
- NELL, E. J. 2002. *On realizing profits in money*. Review of Political Economy, 14, 519-530.
- ORHANGAZI, Ö. 2008. *Financialisation and capital accumulation in the non-financial corporate sector: A theoretical and empirical investigation on the US economy: 1973–2003*. Cambridge journal of economics, 32, 863-886.
- PALLEY, T. 2016. *Financialization: the economics of finance capital domination*, Springer.
- PALLEY, T. I. 2013. *Financialization: what it is and why it matters*. Financialization. Springer.
- PARGUEZ, A. 2004. *The solution of the paradox of profits. Money, Credit, and the Role of the State: Essays in Honour of Augusto Graziani*, 255-268.
- PHILIPPON, T. & RESHEF, A. 2013. *An international look at the growth of modern finance*. Journal of Economic Perspectives, 27, 73-96.
- PHILLIPS, K. 2006. *American Theocracy: The Peril and Politics of Radical Religion, Oil, and Borrowed Money in the 21<sup>st</sup> Century*, Penguin.
- POZSAR, Z., ADRIAN, T., ASHCRAFT, A. & BOESKY, H. 2010. *Shadow banking*. New York, 458, 3-9.
- RAJAN, R. G. & ZINGALES, L. 1996. *Financial dependence and growth*. National bureau of economic research.
- RENAUD, J.-F. 2000. *The problem of the monetary realization of profits in a Post Keynesian sequential financing model: two solutions of the Kaleckian option*. Review of Political Economy, 12, 285-303.
- ROBINSON, J. 1966. *The general theory of employment. An Essay on Marxian Economics*. Springer.
- ROBINSON, J. 1966. *Introduction to Mr. Kalecki*. Studies in the Theory of the Business Cycle 1933–1939.
- ROBINSON, W. I. 2011. Giovanni Arrighi: *Systemic cycles of accumulation, hegemonic transitions, and the rise of China*. New Political Economy, 16, 267-280.
- ROCHON, L.-P. 2005. *The existence of monetary profits within the monetary circuit*. The monetary theory of production. Springer.
- SAWYER, M. 2008. *Kalecki and the Multiplier. The Keynesian Multiplier*, Routledge, London, 153-167.
- SAWYER, M. 2013. *What is financialization?* International Journal of Political Economy, 42, 5-18.
- SECCARECCIA, M. 1988. *Systemic viability and credit crunches: an examination of recent Canadian cyclical fluctuations*. Journal of Economic Issues, 22, 49-77.
- SMITH, A. 1950. *An Inquiry into the Nature and Causes of the Wealth of Nations*, (1776). Methuen.
- SMITHIN, J. 2016. *Some puzzles about money, finance, and the monetary circuit*. Cambridge Journal of Economics, 40, 1259-1274.

- STOCKHAMMER, E. 2012. *Financialization, income distribution and the crisis*. Investigación económica, 39-70.
- STOLBOVA, V., BATTISTON, S., NAPOLETANO, M. & ROVENTINI, A. 2017. *Financialization of Europe: a comparative perspective*. Working paper.
- STRANGE, S. 1986. 1986: *Casino capitalism*. Oxford: Basil Blackwell.
- SWEENEY, R. 2019. *Transformation of banking reconsidered: how feasible is 'de-financialisation'?* Cambridge Journal of Economics, 43, 1053-1071.
- SWEEZY, P. & MAGDOFF, H. 1987. *Stagnation and the financial explosion*. New York: Monthly Review.
- ÜLGEN, F. 2017. *Rethinking monetary and financial stability. A Modern Guide to Rethinking Economics*. Edward Elgar Publishing.
- VAN TREECK, T. 2012. *Financialization*. The Elgar Companion to Post Keynesian Economics, Second Edition. Edward Elgar Publishing Limited.
- WALLERSTEIN, I. M. & WALLERSTEIN, S. R. I. 2004. *World-systems analysis: An introduction*, Duke University Press.
- WRAY, L. R. 1999. *Theories of value and the monetary theory of production*.
- WRAY, L. R. 2012. *Introduction to an alternative history of money*. Levy Economics Institute, Working Paper.
- ZEZZA, G. 2012. Godley and Graziani: *stock-flow consistent monetary circuits. Contributions in stock-flow modelling*. Springer.